



Integration I

Break Out Session Results



Session I Topics

- **Types of Tools**
 - Types of tools needed to be integrated for modeling, simulation and visualization.
- **Current Tool Specifications**
 - What kind of interfaces are currently available/under development?
- **Interoperability Requirements**
 - What features/interfaces are req'd for interoperability

Multiple System “Levels”

- Issues of Global vs. Local integration
- Classification of tools
 - Battlefield
 - Emergency response
 - Fire
 - ○ Plume
 - ○ Natural disaster

Types of Tools to be Integrated

- HPAC & Contam – Plume Simulation
- DBST
- Data Collection Tools
- Analytic Tools
- Scenario Generation Tools
- Data Migration Tools
- Security Tools

Types of Tools to be Integrated (cont.)

- Reliability – anti spoofing tools
- Testing/validation
- Web Services
- Tools with multiple features
- User Interface
- Data Mining

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Types of Tools to be Integrated (cont.)

- Transport and Dispersion
- Casualty/Population
- Logistics
- Environmental (Fixed and Dynamic)
- Weapons Effect
- Infrastructure
- Terrain Representations
- **2 tool sets**
 - 1) Operational Level
 - 2) Mgmt (EOC) level

Interface Requirements

- Types of Tools
 - Planning
 - Training
 - Standard Messaging
 - Strategic
 - Tactical
 - Different Interface Requirements for Each Type of Tool

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Features/Interfaces/Tools Required for Interoperability

- Tools
 - Standard Messaging
 - Data Gathering
 - Analytical
 - Security/Surety
 - Scenario Generation
 - Database Synchronization

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Features/Interfaces/Tools Required for Interoperability

- Tools (cont.)
 - Anti-spoofing
 - Real-Time Data Input (Interfaces)
 - Data Mining
 - DBASE Modeling and Conversion
 - Web Services

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Features/Interfaces/Tools Required for Interoperability

- Features
 - Scalability
 - Common “Operational Picture”
 - Must be Predictive
- Issues
 - Licensing of data
 - # of municipalities
 - HLA must address:
 - Protocol
 - Syntax
 - Semantics Time synchronization



Integration II

Break Out Session Results



Session II Topics

- Interoperability standards
 - What interoperability standards exist?
 - What interoperability standards are required?
- Security requirements
 - What security features are required to balance the need for quick generation of models vs. controlled access?
- Architecture requirements
 - What features should the architecture have for supporting rapid modeling and simulation?
- Architecture straw man
 - What enhancements are required to the architecture proposed by NIST?

Interoperability Standards

- IEEE
- OMG
- XML
- OpenGIS
- Symbology (ISO)
- Web Services
- Text Messaging
- HL7 – Health Care Standards
- Operational terms
- STEP

Standards Recommended For Use

- Scenario-Based Analysis
- Needs for Emergency Response
 - - FOMS & XML Schemas
 - - Geographical/GIS
 - - GSM/Wireless
 - - VVA
 - - Sisostds
 - - Mature Metadata for M&SV

Security Requirements/Issues

- MLS – I
Intelligence Community
- Time & Need To Know Constraints
- Physical Security Issues
- Exportability & Concurrence
- US/International Distribution
- General Communication/Authentication
- Access Control by View
- Audit Trail

Security Requirements/Issues

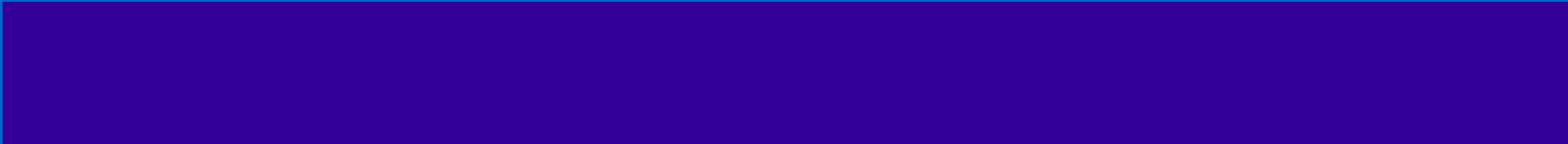
- Constraints put on by Technology Owners
 - - Autonomous Challenge/Response System
 - - Non-repudiation
- Forensic evidence
- Chain of custody
- Data integrity
- Access control by view (CRUD)
- Audit Train
- Event Specific Security Requirements
- Availability/Reliability

Architecture Enhancements

- Security & Access Control
- Device Portability
- HLA (Rules/Library/Object Modeling)
- Scalable Architecture
- Lacks Streaming Data Feed
- Multiple Views Needed
- Data Warehouse/Shared Data Stores
- Multi-user Role Playing Gaming Scenarios
 - Red and Blue Forces

Architecture Requirements

- Repository for Neutral Format standards supporting the Framework
- Hierarchy of Fidelity
- Std API's, Common Services, Data Syntax
- Tactical/Strategic
- Independence for Telecommunications
- Predictive, Historical, Indicators
- Levels of Integration
- Minimum Requirements to play



Thank You

